

REMARKS

In the Final Office Action mailed January 15, 2004, Claims 28 – 36 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Pat. No. 6,133,807 (“Akiyama”) in view of U.S. Pat. Publ. No. 2002/0094152 (“Feierabend”) and the remaining claims were allowed. The rejections are respectfully traversed.

The Office Action relies on Akiyama as disclosing a MEMS device having certain elements recited in the rejected claims, acknowledging that it fails to disclose a detector configured to indicate when the first and second fixed sensing elements are electrically coupled. Feierabend is cited for this disclosure, but Applicants respectfully disagree that this limitation (or the corresponding limitations in the method claims) is disclosed there. In particular, the claims require responding to *electrical* coupling between the first and second fixed sensing elements, but Feierabend instead describes responding to *magnetic* coupling between elements. This is alluded to in paragraph [0076] cited by the Office Action, in which circuit 96 is described as having an “inductance comparator” 98 that responds to changes in *inductance*, which ~~is~~^{as} well known in the art refers to a ratio of magnetic flux linkage to current. The magnetic nature of the sensing mechanism is set forth more explicitly in paragraph [0073], which describes the measurement of the inductance of the magnetic circuit formed by drive coils, bridges, cores, sensing poles, and a magnetic tab in the Feierabend structure. That the operation of the sensing mechanism in Feierabend is specifically magnetic is further evident from Fig. 3A, which explicitly shows the coils in the MEMS cell 80. Applicants thus respectfully disagree with the assertion in the Office Action that “Feierabend discloses measuring an impedance[] to detect the switched states of the MEMS device” (Office Action, p. 3) since Feierabend describes only measurement of inductance changes as part of its position sensing.

In addition to the fact that Feierabend does not disclose the claim limitation for which it is relied on by the Office Action, Applicants further note that the proposed combination of Akiyama and Feierabend would be inoperable for its intended purpose and/or would require changing the principle of operation of one of the references, facts that argue strongly against the

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PATENT

Amdt. dated February 20, 2004

Amendment under 37 CFR 1.116 Expedited Procedure

Examining Group

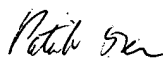
obviousness of the combination. MPEP 2143.01. In particular, the deformation of air bridge 18 shown in Fig. 1 of Akiyama caused by activation of central conductor 13 would not result in a change in inductance. Use of the circuit shown in Fig. 3B of Feierabend would therefore not detect that deformation since there would be no inductance change to be detected by inductance comparator 98.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,


Patrick M. Boucher
Reg. No. 44,037

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 303-571-4000
Fax: 415-576-0300
PMB:pmb
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